

## **AGRICULTURAL UNIVERSITY DEVELOPMENT**

**March 1994**

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### **Summary**

USAID investments in agricultural universities have yielded high returns in terms of advancing agricultural development in the developing countries in which they are located. Despite their impressive record of accomplishments, most of them have not achieved their full potential, and for many the future may be one of decline and stagnation. To address this problem, new types of donor assistance will be needed to develop strategic management capacities, to modernize education and research programs, and to develop international networks in support of university innovation.

### **Background**

In the immediate post World War II period, most developing countries faced a severe shortage of agricultural technicians and scientists to support public and private sector rural development efforts. In many countries, senior- and middle-level positions either remained under the control of expatriate staff or were assumed by underskilled host-country nationals. The new developing countries were intent on expanding research and extension services to farmers, but the lack of trained manpower seriously hampered the development and application of new agricultural technologies. Donors and host countries recognized that in-country institutions of higher education would need to be strengthened to address this problem.

Since 1952, USAID has assisted the development of agricultural universities and faculties in 40 developing countries. Most of this assistance has been through partnerships with U.S. land-grant universities in providing technical assistance. Many U.S. faculty went on long-term overseas assignments at host country universities to help establish and improve education and research programs. Similarly, thousands of host country faculty came to U.S. universities for advanced degree training in agricultural sciences. In 1985, CDIE undertook a 4-year study of 23 agricultural universities and faculties in 10 countries (India, Indonesia, Thailand, Brazil, Mexico, the Dominican Republic, Ethiopia, Morocco, Malawi, and Nigeria). The synthesis report, *Beyond the Neoclassical University: Agricultural Higher Education in the Developing World-An Interpretive Essay*, serves as the basis for this summary.

### **Findings**

USAID investments in agricultural higher education have yielded high returns. Undergraduate and graduate programs at developing countries' universities greatly expanded the supply of trained agriculturalists. In addition, many of the universities led the research and development of new production technologies for the agricultural sector. Now, however, many agricultural universities face severe problems that require new types of donor assistance to solve:

- ! **Narrow and static views of their mission.** Traditionally, many agricultural universities have defined their primary mission as being a source of science and technology for increasing food and animal production. This production emphasis neglects critical aspects of the development process and isolates these universities from their environment. The absence of a strong social science dimension has deprived agricultural universities of broader and more diverse views on their potential roles in the development process.
- ! **Fragmented and inappropriate organizational structures.** Academic departments based on conventional disciplinary specializations often serve as the structural basis for the agricultural universities. Rather than integrating and linking university activities to the countries' development agendas, the universities frequently have become highly fragmented arenas in which many separate projects are undertaken with little management oversight.
- ! **Lack of strategic management systems.** When they lack a clear sense of mission, strategy, and role, universities risk being pushed and pulled in many directions. Many agricultural universities face this problem and lack the strategic planning tools to overcome it.
- ! **Lack of strong linkages to client groups.** Many universities have only tenuous links with important constituencies in the policy arena. This isolates them from direct exposure to critical policy and operational issues that are at the heart of agricultural and rural development.
- ! **Outmoded research and educational methodologies.** University research and education programs designed to address systemic problems in rural and agricultural development have been only partially successful. A major obstacle has been their dependence on inappropriate learning methods that use didactic modes applicable only to the classroom or laboratory. These approaches have not equipped students with the skills needed to analyze complex social and economic systems or to develop strategies for improving system performance in the real world.
- ! **Declining financial and political support.** Current underfunding of agricultural universities and faculties is weakening their research and educational programs. Funding for research is declining, library resources are becoming outdated, and laboratory equipment, instructional material, and transportation for field research are frequently unavailable. In many countries, agricultural universities have not been able to develop a strong base of national support because many are funded by ministries of education rather

than agriculture. Ministries of agriculture have tended to create parallel research agencies, where they invest scarce research funds, thus depriving universities of adequate funding.

- ! **Isolation from international advances in science and education.** The early generation of university scientists and leaders who received U.S. training under USAID financing are now retiring. Funding for overseas training has dropped off in recent years, reducing the number of university staff exposed to new ideas, the latest technological developments, and alternative ways of solving problems. Because the new generation of faculty lack international exposure, they may also lack the experience and vision necessary for sustaining institutional excellence. Those who have been trained abroad do not have support networks of more experienced senior personnel to guide them in applying new skills.

## Recommendations

USAID should:

- ! **Develop innovative approaches to help developing countries' universities modernize** by changing their approaches in the following ways:
  - **Redefine and broaden the university mission** to address the dominant technical, institutional, and policy issues in the rural sector. University research and education should address policy and institutional concerns as well as technological factors that contribute to rural and agricultural development. New strategies are needed for the university to become more responsive to its changing environment.
  - **Promote strategic planning as a tool for agenda setting, management, and linkage development.** Donor efforts should emphasize technical assistance in strategic planning and management.
  - **Develop strong linkages with external constituencies and policy arenas.** Linkages with farmer groups, agro-industrial organizations, and other public and private organizations provide the university with information and resources for improving and sustaining its education and research programs.
  - **Emphasize and apply learning and problem-solving methods** appropriate for the rural system. Newly developed concepts and methods for improving rural systems can aid the design of highly innovative agricultural university education and research programs. The new learning methods enable the university to shift from a pedagogy of teaching, with the student as passive recipient of facts, to a problem-based learning approach that requires the student to become competent in research and management.

- ! **Encourage government agencies to transform their role** from that of regulator to that of facilitator of university innovation. USAID should provide long-term technical assistance to national agencies in decentralizing their programming processes and in promoting university linkages with out-of-country centers of university innovation.

**!** **Support networks that link LDC agricultural universities to worldwide sources of** the most advanced innovation in education and research. Many LDC universities are now mature institutions, so linking them in a donor-recipient relationship may no longer be valid. They need more collaborative learning relationships with a larger network of institutions in both the developed and the developing world. USAID should support development of new networks that link these universities with a wider arena of scientific and educational institutions.